
 weight and 10 - 35 g/m<sup>2</sup>, wherein the ink-jet recording material satisfies a relation of  $\{(B+C)/A\} = 0.15$  to 0.45, and a ratio of B/C is less than 1, where A is a thickness of the base paper; B is a thickness of the polyolefin resin layer at the surface on which the ink-receptive layer is provided; and C is a thickness of the polyolefin resin layer at the opposite surface to that on which the ink-receptive layer is provided, a density of the base paper is 0.60 to 1.05 g/cm<sup>3</sup>, A is 50 to 300  $\mu\text{m}$ . and B is 8  $\mu\text{m}$  or more to less than 20  $\mu\text{m}$ .

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 Claim 13. (Amended) The ink-jet recording material according to claim 1, wherein the ink-receptive layer contains a cross-linking agent of the hydrophilic binder selected from the group consisting of boric acid and a borate.

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## REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claim 1 has been amended as shown above, by essentially incorporating the subject matter of claims 2, 3, 4, 5 and 11 into claim 1. Claim 1 has additionally been amended to replace the word "printing" in the preamble with the word "recording" to correct a typographical error, as indicated by the preambles of the claim 1 dependent claims. Claims 2, 3, 4, 5 and 11 have accordingly been cancelled. Claim 13 has been amended as shown above, by essentially incorporating the subject matter of claim 14 into claim 13. Claim 14 has accordingly been cancelled. No new matter has been added.

The Advisory Action refers to the rejection of claims 1-12 under 35 USC 103(a) over Koji et al. in view of Kobayashi et al. The applicants continue to traverse this rejection. Further, the teachings of the previously cited reference Romano et al. do not remedy the deficiencies of Koji and Kobayashi. The presently claimed invention is fully allowable in view of the prior art.

The present invention is to solve specific problems possessed by an ink-jet recording materials having an ink-receptive layer with specific characteristics (i.e., it has an ink-receptive layer containing a large amount of fumed silica which is an ultrafine particle in a porous state) such as surface flaws which are caused (at the time of heat treatment or during storage in a rolled state) by optimizing various conditions of a paper support coated by a polyolefin resin. Please note that presently amended claim 1 recites the ink-receptive layer as containing fumed silica in an amount of 50 to 90% by weight and 10 - 35 g/m<sup>2</sup>.

The ink-jet recording material of the presently claimed invention has an ink-receptive layer containing fumed silica with an average primary particle size of 5 to 50 nm and a hydrophilic binder on a support comprising a polyolefin resin-coated paper. This ink-receptive layer uses fumed silica having an average primary particle size of 5 to 50 nm, resulting in a material with excellent ink-absorption and glossiness. However, the ink-receptive layer is likely to have surface flaws. In an ink-jet recording material using a polyolefin resin-coated paper as a support, as in the presently claimed invention, a printed image is observed by reflected light. Accordingly, it is preferred for the surface to have high glossiness, but with higher glossiness, the flaws on the surface of the ink-receptive layer are more noticeable. As previously stated, by using fumed silica

having an average primary particle size of 5 to 50 nm, high glossiness can be obtained but with flaws likely on the surface of the ink-receptive layer. By using a polyolefin resin-coated paper, higher glossiness can be obtained as compared with that of a conventional paper support. Therefore, by using a polyolefin resin-coated paper and fumed silica in combination, glossiness can be greatly improved, but flaws are more likely caused on the surface of the ink-receptive layer. This problem cannot be solved by employing conventional polyolefin resin-coated paper. The surface flaw problem can be solved by satisfying all the requirements recited in present claim 1.

This is proved by the descriptions of the working Examples in the present specification and Comparative Example 1 and Comparative Example 2.

Thus, the presently claimed invention is nowhere disclosed, suggested or made obvious by the cited references. The presently claimed invention is fully allowable under Section 103(a) in view of the cited art.

Additionally, in the Amendment filed by the applicants dated April 15, 2003 (acknowledged in the Advisory Action), the applicants observed that the cited US Publication 2001/0004487 to Kaneko et al. has a publication date of June 21, 2001 and filing date of December 19, 2000. The present application claims priority to Japanese Application No. 2000-252650, with filing date of August 23, 2000. The U.S. Patent and Trademark Office (PTO) acknowledged in the Office Action dated July 2, 2002, the applicant's claim of priority for the subject application and acknowledged receipt of the certified copy of the priority document. The applicants enclosed with the April 15, 2003 Amendment, a verified English translation of the priority document, Japanese Application No.

2000-252650 (enclosed herewith) in order to perfect their claim of priority. The filing date of the applicant's priority document, August 23, 2000 is prior to both the publication date of June 21, 2001 and filing date of December 19, 2000 for the cited reference of Kaneko et al., US Publication 2001/0004487. Accordingly, the applicants request that withdrawal of the aforesaid Kaneko et al. as a reference be acknowledged.

In view of the above, it is believed that this application is in condition for allowance and a Notice to that effect is respectfully requested.

Respectfully submitted,

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## APPENDIX

### VERSION WITH MARKINGS TO SHOW CHANGES MADE

#### IN THE CLAIMS:

#### Proposed Amendments To Claims 1 and 13 Showing Deletions And Insertions.

Claim 1. (Twice Amended) An ink-jet [printing] recording material comprising a support in which both surfaces of a base paper are covered by a polyolefin resin, and an ink-receptive layer containing fumed silica having an average primary particle size of 5 nm to 50 nm and a hydrophilic binder provided on the support and the ink-receptive layer contains fumed silica in an amount of 50 to 90% by weight and 10 - 35 g/m<sup>2</sup>, wherein the ink-jet recording material satisfies a relation of  $\{(B+C)/A\} = 0.15$  to  $0.45$ , and a ratio of B/C is less than 1, where A is a thickness of the base paper; B is a thickness of the polyolefin resin layer at the surface on which the ink-receptive layer is provided; and C is a thickness of the polyolefin resin layer at the opposite surface to that on which the ink-receptive layer is provided, a density of the base paper is  $0.60$  to  $1.05$  g/cm<sup>3</sup>, A is  $50$  to  $300$   $\mu\text{m}$ , and B is  $[5$  to  $25]$   $8$   $\mu\text{m}$  or more to less than  $20$   $\mu\text{m}$ .

Claim 13. (Amended) The ink-jet recording material according to claim 1, wherein the ink-receptive layer contains a cross-linking agent of the hydrophilic binder selected from the group consisting of boric acid and a borate.